

two seconds contact with a gasoline fire.

**§ 160.171-15 Instructions.**

(a) Each suit must have instructions for its donning and use in an emergency. The instructions must be in English and must not exceed 50 words. Illustrations must be used in addition to the words. These instructions must be on the exterior of the storage case or printed on a waterproof card attached to the storage case or to the suit.

(b) If the suit has an inflatable auxiliary means of buoyancy, separate instructions covering the use of the inflation valve must be provided on the suit near the valve or on a waterproof card attached near the valve.

(c) Instructions for donning and use of the suit in an emergency must also be available in a format suitable for mounting on a bulkhead of a vessel. This placard must be in English, must include illustrations, and must include a warning as to the risk of entrapment in a submerged compartment due to the buoyancy of the suit.

(d) Instructions for donning and use of the suit in an emergency, instructions for care and repair of the suit, and any additional necessary information concerning stowage and use of the suit on a vessel must be available in 8½×11 loose-leaf format suitable for inclusion in the vessel's training manual.

**§ 160.171-17 Approval testing for adult size immersion suit.**

Caution: During each of the in-water tests prescribed in this section, a person ready to render assistance when needed should be near each subject in the water.

(a) *General.* An adult size immersion suit must be tested as prescribed in this section. If the suit is also made in a child size, a child size suit must be tested as prescribed in § 160.171-19. If the suit is also made in an oversize adult size, an oversize adult suit must be tested as prescribed in § 160.171-17(g) to determine the measured buoyancy for the suit. No additional testing will be required if the oversize adult suit is of the same design as the adult suit except for extra material to provide for larger persons.

(b) *Test samples.* Each test prescribed in this section may be performed by using as many immersion suits as needed to make efficient use of the test subjects and test equipment, except that each subject in the impact test described in § 160.171-17(c)(11) must not use more than one suit during the test, and the suits used in the impact test must also be used in the thermal protection test described in § 160.171-17(d).

(c) *Mobility and flotation tests.* The mobility and flotation capabilities of each immersion suit must be tested under the following conditions and procedures:

(1) *Test subjects.* Seven males and three females must be used in the tests described in this paragraph. The subjects must represent each of the three physical types (ectomorphic, endomorphic, and mesomorphic). Each subject must be in good health. The heaviest subject, of either sex, must weigh at least 135 kg (298 lb.). The heaviest male subject must weigh at least 115 kg (254 lb.) and the lightest male subject must weigh not more than 55 kg (121 lb). The heaviest female subject must weigh at least 115 kg (254 lb.) and the lightest female subject must weigh not more than 55 kg (121 lb). Each subject must be unfamiliar with the specific suit under test. Each subject must wear a standard range of clothing consisting of:

- (i) Underwear (short sleeved, short legged);
- (ii) Shirt (long sleeved);
- (iii) Trousers (not woolen);
- (iv) Woolen or equivalent synthetic socks;
- (v) Rubber soled work shoes.

(2) *Donning time.* Each subject is removed from the view of the other subjects and allowed one minute to examine a suit and the manufacturer's instructions for donning and use of the suit in an emergency. At the end of this period, the subject attempts to don the suit as rapidly as possible without the aid of a chair or any support to lean on. If the subject does not don the suit completely, including gloves and any other accessories, within two minutes, the subject removes the suit and is given a demonstration of correct donning, and again attempts to don the suit. At least nine of the ten